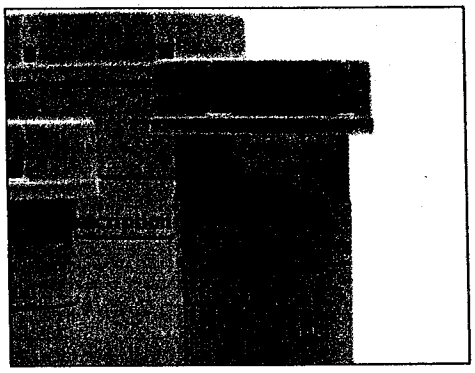
CANNABIS AS MEDICINE

Some observations about a controversial treatment.



By K. Allan Ward, MD

Editor's note: be clearly advised that Practical Pain Management *neither endorses, supports, or condemns the use of cannabis in pain treatment. We have chosen to publish this article from among others we have received on this subject because it presents what appears to be factual information from Montana, a state that fundamentally has sanctioned its use.*

In this article, we will use the term *cannabis*, since *marijuana* is a term which is considered racist and derogatory to many international readers. Cannabis has achieved semi-legal status in the United States for use as a medicine in 14 states,[1] although its status by federal classification remains Schedule I under the Controlled Substances Act:

A) A drug or other substance that has a high potential for abuse.
B) A drug or other substance that has no currently accepted medical use in treatment in the United States.
C) There is a lack of accepted safety for use of the drug or other substance under medical supervision."[2]

Therefore, prescribing cannabis is impossible under present DEA regulations and knowingly prescribing controlled substances to a person who is using cannabis—regardless of whether for medicinal or discretionary purposes—will potentially violate DEA licensure for the provider. Two synthetic prescription medications currently exist in the U.S. that can be prescribed. This conflict in its legal status between state and federal regulation remains a gray area and will be discussed in this article. The author lives in Montana, which legalized the medical use of cannabis in 2004. We will discuss how its use in pain medicine might be approached without forfeiting DEA licensure.

The Montana Experience

Presently, there are more than 14,000 registrants in Montana with more than 11,000 giving 'chronic pain' or 'chronic pain and muscle spasms' as the reason for registration.[3] There are more than 2,500 "medical caregivers" who are registered to grow and provide cannabis to the patients. Montana law also allows for a registered caregiver to grow and provide cannabis to the registered user.

At the time of publication, no providers in Montana have had to either forfeit their DEA license or been subjected to state licensing board discipline for prescribing controlled substances with cannabis use. One provider has been censured for inappropriately providing registration in a series of clinics held on weekends with hundreds of registrations in each clinic. One provider in Montana has provided more than 3,000 registrants with certification to use medical cannabis. In most cases, after registration is obtained, the "patient" has no formal followup with the provider until the next year for renewal. Cities and counties in Montana have varied widely in their approach to the issue of medical cannabis. Some have local laws banning its use. Others have formal regulation of the provider storefronts. An informal survey by local journalists has not revealed a significant difference in criminal activity in the municipalities with a high tolerance for use. The overarching concern has been the bogus acquisition and use of cannabis by young persons, some of who are still in high school.

Online Survey of Cannabis Users

The author performed an open-ended online survey of cannabis users in Montana. The survey was advertised by giving an interview which was published in the five largest newspapers in Montana and spread to the internet news sources for medical cannabis and cannabis reform. There were 360 participants, with 292 of them being Montana medical cannabis registrants. Of the 292 responding as Montana registrants, only 13% were between the age of 21 and 30 years while actual MT registration statistics indicate that more than 25% of the registrants are in that age range. Because of the methods used, and comparison to the known registrants from Montana state sources, the survey may not be representative of the actual registrant population. 79% of the respondents have a caregiver but 48% also grow their own cannabis.

Background of Cannabinoids

A synthetic form of the main psychoactive ingredient of cannabis—tetrahydrocannabinol-delta-9 (THC)—has been available by prescription in the USA since 1986 (dronabinol, marketed as Marinol®) and was downgraded from Schedule II to Schedule III in 1999[4] when it was noted that it has little street value because its cost exceeds the cannabis available.[5] It is listed for use in nausea and vomiting associated with cancer chemotherapy and appetite improvement for patients with AIDS. An additional synthetic cannabinoid, racemic-nabilone (marketed in the USA as Cesamet®), has approval for chemotherapy-related symptoms. Some providers

Table 1. Survey Results of 292 Medical Cannabis Registrants in Montana

DEMOGRAPHICS	
Female	38%
Male	67%
Currently employed	55%
21 to 30 year-old	13%
31 to 40 year-old	24%
41 to 50 year-old	22%
51 to 60 year-old	30%
CANNABIS INGESTION	
Smoking	85%
Eaten in food	60%
Vaporizer	42%
Tinctures	32%
Cannabis Tea	17%
PREFERRED METHOD OF USE	
Smoking	64%
Eaten in food	17%
Vaporizer	22%
Tinctures	6%
Cannabis Tea	1%

TREATMENT OUTCOMES	
Improved pain relief	88%
Reduced anxiety	70%
Reduced muscle spasms	61%
Decrease in medication use	74%
ADVERSE SIDE-EFFECTS	
Decreased short-term memory	38%
Poor ability to concentrate	23%
Delays in reaction time	10%
Anxiety	8%
ONSET OF CANNABIS USE	
Before age 18	50%
Between 18 and 25	30%
FREQUENCY OF USE	
3 or more daily, with a reported cost of $200-$400 per ounce	53%
DRUG EXPERIMENTATION AMONG RESPONDENTS	
Mushrooms	88%
Cocaine	63%
LSD	57%
Amphetamines	39%

OTHER REPORTED ISSUES	
Required medical treatment for drug overdose	5%
Treated for emotional difficulties by a counselor, psychologist or psychiatrist	37%
Charged with driving under the influence of alcohol	10%
Consume tobacco	41%
Take prescription medications (of these, 56% take controlled substances)	55%
Experience extreme intoxication when using cannabis with prescription medications or alcohol	14%
Rendered unable to perform some activities when using cannabis	15%

have used both medications for chronic pain. In Canada and Europe, a cannabis-based medical extract is approved for use as an oromucosal (mouth) spray (Sativex®). This product is entirely derived from the cannabis plant itself—with specially grown cannabis plants—and an extensive quality control process involved in production. A book was written about the development of this product,[6] which has entered Phase 3 drug testing in the USA.

A synthetic cannabinoid receptor inverse agonist—rimonabant (Acomplia®)—was approved in Europe for use in obesity, but with reports of "serious psychiatric disorders" associated with its use, was withdrawn from the market in 2009.[7] It was never marketed in the United States.

Cannabinoid receptors were identified in 1988.[8] There are two general receptor types, CB1 (generally in the CNS) and CB2 (generally in the immune system).[9] These effects are widespread, and act upon the gastrointestinal, cardiovascular and skeletal system.[10] The major endogenous cannabinoids in humans are anandamide and 2-arachadonoyl glycerol (2-AG).[11] Cannabis has a widespread variation on its constituents, and has been cultivated for thousands of years. The desired content for discretionary use is the psychoactive substance, THC, which is primarily a CB1 agonist. Another major constituent is cannabidiol (CBD), which has little or no psychoactive effects.[6] Almost all of the cannabinoids have anti-inflammatory effects.[7] It is felt that the combination of active ingredients in cannabis exert an entourage effect[6] which explains better results with cannabis than the single-agent CB1 agonists currently available in the United States.

Discussion

Because of the prevailing federal policy which regulates controlled-substance prescribing and dispensing, we have been given a legal opinion by counsel that knowingly providing controlled substance prescriptions or dispensing intrathecal controlled-substances to cannabis users could result in a loss of licensure, although we are not aware of this actually occurring. We have a policy of including a paragraph in service agreements for intrathecal pumps and controlled-substance prescribing that states we will not prescribe controlled-substances for persons continuing to use cannabis. From a technical standpoint, it doesn't appear that cannabis has significant drug interactions with opioids. Additive effects on motor control and mental status do occur. Studies regarding alcohol use with cannabis have shown significantly higher risks in operating motor vehicles.[12]

Concerns and Benefits of Cannabis

The safety profile of cannabis is well-established. The toxicity of the substance is extremely low; it is essentially impossible to consume a toxic amount of cannabis. The primary concern of medical and health organizations is that smoking anything is an unhealthy practice, so other routes of administration need to be employed if cannabis is to used for medical conditions.

Psychiatric side-effects can be severe in persons with pre-existing psychiatric conditions such as bipolar disorder and schizophrenia, especially when cannabis is used in adolescence, with cannabis use before age 15 resulting in a four-fold increase in psychosis by age 25.[13-15] There are reports of cannabis-induced psychosis, although this may be an early appearance of psy-

chosis which can improve with abstinence.[16] It appears that cannabis use under the age of 20 may have negative effects on the maturing nervous system.

There are many small studies that have touted cannabis use for seizures, polyneuropathy, anxiety and chronic pain. Its use for symptom management in multiple sclerosis, including pain, spasticity and possibly fatigue, is established.[17]

Case Report 1. The patient was a 69-year-old female with widely metastatic breast cancer, seen in pain clinic for severe back pain, with radiation of pain into the left foot. MR imaging demonstrates a left paracentral disc protrusion at the lumbosacral junction. She has significant nausea with the use of oral opioids. She is given a transdermal fentanyl patch (0.025 mg per hour), which is tolerated somewhat better but still causes nausea. She has lost more than 40 lbs during and after the chemotherapy and describes anorexia. A fluoroscopically-guided caudal epidural steroid injection provided about 25% relief. She was started on Cesamet® (nabilone) 1 mg twice daily, which improved her nausea and also improved her appetite. The effects lasted for about 9 hours, so she began to take the medication at 1 mg three times daily. This provided good relief of her pain and nausea, with an improved appetite. She was pleased with the combination of the fentanyl and nabilone.

Case Report 2. The patient is a 74-year-old female with a history of a left thalamic stroke, with no residual weakness or functional deficits. She developed a severe hemidysesthesia after the stroke, affecting her right side, with facial involvement. She has been diagnosed with Alzheimer-type dementia as well. She has been tried on gabapentin, pregabalin, amitriptyline, nortriptyline, duloxetine and transdermal fentanyl, none of which have been helpful. She is being given Aricept® (donepezil) and Namenda® (memantine HCl) combination therapy. She is taking transdermal fentanyl (0.025 mg per hour, changed every 3 days). She has had some moderate relief with naproxen, but this was withdrawn when she had mild kidney failure. A friend shared some cannabis-containing cookies that gave her very good relief and allowed her to sleep for six hours. Her provider will not give her the permission to use medical cannabis with the fentanyl. Subsequently, she was given a prescription for Marinol® (dronabinol), 5 mg. Her first dose made her sleep for more than 18 hours. This was adjusted to the 2.5 mg dosage, which was less sedating, and gave fair pain relief. The patient noted that the cannabis-containing cookies were superior.

Case Report 3. I was asked to see this patient as a pain consult. The patient is a 52-year-old male, a disabled nurse with three previous spine surgeries. He has been prescribed 80mg of extended-release oxycodone 3 times daily, with 4mg of immediate-release hydromorphone every 4 hours for breakthrough pain, up to 5 times daily. Additionally, he is taking carisoprodol 350mg 5 times daily and diazepam 10mg 3 times daily. He has refused to obtain a primary-care provider for his medical needs, and refused to consider any change in the oral medications. Unbeknowst to the provider, and having failed to mention it in an initial interview, the patient had obtained a medical cannabis registration and was using cannabis regularly. A routine initial urine drug screen demonstrated a positive cannabis use. Upon being made aware of this, the patient stated that he had the right to use the cannabis since he had a registration. He was offered the alternative of dronabinol, but refused it. As a result, he sought another provider for his treatment.

Summary

Cannabis use in public policy remains controversial because of state and federal law contradictions. These issues involve both discretionary use and the legitimate medical use of cannabis, either as a botanical product or as a medical extract. The pain practitioner has a special concern, since it appears that cannabis has profound and unique effectiveness for some painful and disabling conditions.

In Montana, 299 persons died of prescription drug overdoses in 2009, with less than 25% of them having been prescribed the medications that were the cause of death.[17] Although far less dangerous than any other controlled-substances (no deaths are known to have been caused by cannabis overdose), pain providers that prescribe controlled-substances and recommend cannabis use may—until a more uniform policy nationwide is established—be subject to loss of DEA licensure. We would hope that the future brings more clarity to these policies. ■

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Notes and References

1. As of early 2010, states with medical cannabis waivers include Alaska, California, Colorado, the District of Columbia (D.C.), Hawaii, Maine, Michigan, Montana, Nevada, New Jersey, New Mexico, Oregon, Rhode Island, Vermont and Washington. A pending referendum in California will pass overall legalization. Montana is considering a legislative overhaul of the current law because of concerns mentioned in this article. The reader should seek current information on this, as state laws are changing rapidly.

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17. Unpublished data from the MT Department of Criminal Investigation, courtesy of Mr. Mark Long, department chief.

My name is Allan Ward. I am from Great Falls, where I work in a pain clinic and surgery center. I have practiced as a pain physician and neurophysiologist for more than 20 years. . My practice includes all manner of pain cares, including work with acute, chronic and cancer pain. I perform x-ray guided spine procedures and diagnosis peripheral nerve conditions as well. I am trained and board-certified in rehab medicine, pain medicine and neurophysiology. I have federal licensure for regular prescribing and narcotic addiction. I currently serve as consultant for most providers in the central MT area. Since coming to Great Falls in 2004, I have seen more than 5,000 patients with pain.

In my practice several years ago, I became curious about the use of cannabis for pain after hearing much in the press about its use and misuse. I conducted an online survey of MT cannabis users, with about 350 respondents. An article about this research was published in a pain management journal in Sept of last year[1]. This survey and my own personal experiences would indicate that cannabis may be a better choice than narcotics for some types of pain. Certainly, the dangers of cannabis are not in the same league as prescription narcotics or alcohol. In 2009, at least 299 persons died of prescription drug overdose in MT. No one died from cannabis overdose. I don't believe that cannabis is a completely safe substance. As such, its medical use should be observed and regulated. Adolescent use can cause long-term problems. Driving and its use are dangerous. This is also true of alcohol and narcotics.

Specifically, cannabis is an excellent choice for the pain caused by nerves that are being damaged by disease, such as diabetes or spinal deterioration. It is excellent in treating many symptoms associated with multiple sclerosis, a condition that is relatively common in Montana. Taken together, these conditions amount to a population exceeding 20,000 persons in Montana, most of whom more than 50 years of age. Like any other medication, cannabis is not going to work for everyone, but it would be a good choice for some.

Cannabis was recognized for a number of purposes prior to being outlawed in 1937. I cannot see how its utility has changed. Its physical characteristics would place its addiction or abuse potential as being below that of alcohol or narcotics. Research in the UK places its danger for addiction below alcohol, narcotics and tobacco. Although I don't approve of smoke inhalation for its use, the relative safety of its use from a known source make it very useful for several very painful and life-ending conditions. Its use in these conditions can be far superior to other prescription medications.

The current legal status and regulations in Montana has resulted in blatant abuse. Its legal status in the federal code contradicts this, but current policy is "hands-off" on state regulations, which means that Montana can decide the status of what constitutes legitimate use. Repealing this law would be a serious mistake – and very unfair, in my opinion. Instead, I would like to see cannabis recognized in our state as a valid medical alternative, and be prescribed by providers that want to treat the appropriate conditions. I have taught about 200 persons about safe narcotic prescribing. That training can be accomplished for cannabis in a similar fashion.

Using cannabis makes it possible for patients to reduce or eliminate their use of other drugs, including opiates, whose side-effects can be much more lethal – and in the case of chronic pain patients, we are talking about people who, for the most part, suffer from conditions that are permanent, and progressive with aging… these patients often will need pain relief help for the rest of their lives. Cannabis has been used in some cultures for thousands of years. I cannot say that any of the current prescription narcotics are as safe or effective. I staff narcotics addicts weekly on a chemical dependency unit. There are cases of cannabis abuse seen there, but the major problems are with prescription narcotics and alcohol by far, greater than 90%.

My research also has found that whereas about two-thirds of pain patients dependent on opiates are not able to function well enough to work and pay taxes, two-thirds of cannabis patients ARE able to function and hold down jobs – That's a striking contrast, and one that indicates the value of allowing cannabis as a choice for physicians and patients . The balance of comparable relief with less side-effect means a better quality of life for cannabis patients. It would appear that the adverse affects of cannabis are less than narcotics as well.

There is no question that Montana's medical cannabis law has been abused… I have no doubt that most of the current so-called patients registered for chronic pain, especially those under age 40, don't actually suffer from conditions that warrant cannabis use. The registration is used to provide a legal shield for the discretionary use of the drug. But this problem can be fixed, and the solution isn't to make it harder for a pain patient to receive a card but rather to tighten the rules and procedures for physicians to use for *all* patients, making the cannabis patient comparable to someone receiving narcotic prescriptions, with regular follow-up and monitoring, including urine drug testing as for other drugs.

The Board of Medical Examiners has improved its policies to oversee this, and should be given more authority to investigate questionable clinics

Doctors who make more than a few recommendations should be required to have continuing education credits in cannabis science that are approved by the American Medical Association or be recognized experts in pain medicine and palliative care.

The form the health department uses, that a physician fills out, should require the physician, for each recommendation, to affirmatively attest that each item in the Board of Medical Examiners' required standards of practice has been fulfilled

I believe that a form of that sort would have prevented most of the inappropriate recommendations that occurred – and I also believe many of those currently registered patients, under the Medical Examiners' new policies, will be unable to obtain renewals

I would be glad to answer any questions you may have, or help the committee in any way that I can with its work… but I also need to be back in Great Falls for a full clinic this afternoon. Thanks for your time. K. Allan Ward MD. mail_drop@dr.com

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